Despite a global economic recession and the burst of the e-commerce bubble, today’s organizations are realizing the necessity of e-services. In today’s ever-changing economy, businesses are not only increasingly becoming service-oriented – even those organizations that have traditionally offered tangible products are now offering services to complement their product (i.e., car manufacturers offering car servicing as well as lucrative financial services to complement their vehicle sales), they are also being conducted electronically (e-businesses) by providing or supporting these services using the Internet. As such, these service-centered or service-offering organizations need to migrate their traditional services to an electronic environment, thus providing electronic services (e-services).

The move to e-services is not a new concept, but the IT infrastructure has been lagging to support these endeavors. Services must be a core component of a company’s supporting IT infrastructure. This has been a challenge for many organizations over the past decade. Without a symbiotic relationship between IT and business teams, organizations have been relying on outsourcing and mass-produced, costly-to-modify software products that have been providing less than optimal productivity and efficiency. As a result, organizations have not been able to benefit from rapid technological evolutions and gain competitive advantage in service-oriented environments.

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Bill Karakostas (PhD) and Yannis Zorgios (PhD) co-authored the book, Engineering Service Oriented Systems: A Model Driven Approach (IGIP 2008), to address the need for IT systems that complement the service-oriented structure of organizations. With a focus on “service engineering”, a new discipline for implementing services, the authors propose a partnership between the business and IT service design teams to co-exist and produce service-oriented e-business IT infrastructure that results in the delivery of productive, efficient, and profitable e-services.

Karakostas and Zorgios provide a methodology to develop, implement and successfully manage IT-enabled business services. The book is geared toward anyone responsible for managing a service-centered IT infrastructure including those IT professionals such as CIOs, strategists, software architects and designers, and students in software engineering.

The book is organized into four sections including Service Concepts, Service Languages and Standards, Service Engineering Concepts and Techniques, and Service Deployment Execution and Management.

The first section, Service Concepts, focuses on identifying value adding services in an organization by providing basic concepts, standards, and definitions. Chapter 1 provides an introduction to services including the motivation for the text and fundamental definitions related to services and service orientation. Chapter 2 provides more in-depth definitions related to e-services – such as main service concepts, principles of service modeling, and service-oriented business architecture.

The second section, Service Languages and Standards, presents a survey of Web Services, the most important technologies available for service realization. Chapter 3 discusses the standards for web services including programming languages such as XML, protocols for service specifications, messaging, and publishing, and other Web-service standards. Chapter 4 covers the service coordination. This includes more advanced service standards addressing individual services as well as the coordination of multiple services in the context of business processes and more complex services.

The third section, Service Engineering Concepts and Techniques, deals with the service engineering lifecycle -- specifying, modeling, and implementing services. Chapter 5 presents model-driven service engineering. The chapter discusses principles of model-driven development and the Object Management’s Group’s model-driven architecture (MDA). Chapter 6 introduces the topic of ontologies for model-driven service engineering. The chapter is concerned with the vocabulary of services by introducing appropriate terminology to allow communication between business services and their software equivalents. Chapter 7 provides a methodology for model-driven service engineering through an illustration of how this paradigm for building services can be applied to a mainstream practice.

The fourth and final section, Service Deployment Execution and Management, is concerned with the overall execution and management of e-services ranging from architectures and environments, security issues, and life-cycle scenarios. Chapter 8 presents the service-oriented architecture (SOA) which is a framework for a disciplined approach to introducing services to an organization. The chapter also focuses on technologies, standards, security, monitoring, and managing services. Both Chapters 9 and 10 provide case study applications to reinforce concepts. Chapter 9 presents a case study specifically oriented to the service development execution and management platform while Chapter 10 presents a “real-world” case study that applies concepts from throughout the text.

The book concludes with Chapter 11 which provides an overview and summary of engineering service oriented systems.

Engineering Service Oriented Systems: A Model Driven Approach presents the ingredients and the recipe to design, develop, deliver, and manage an IT infrastructure to support business

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services that will be achievable and sustainable in an ever-changing economic environment through adaptability and synergy between the IT services and the business itself.

Nicole B. Koppel, PhD is an associate professor in the Department of Management & Information Systems at Montclair State University, Montclair, New Jersey. Prior to joining the faculty at Montclair, she held an instructor position at Rutgers Business School, Rutgers University. Koppel’s research focus is in the broad area of assessment in technology and quantitative studies. In addition, she has published in the area of Operations Management. Her research can be found in many peer-reviewed journals including: Journal of Informatics and Education Research, Decision Sciences Journal of Innovative Education, T.H.E. Journal, and Journal of Applied Psychological Measurement. Dr. Koppel’s research has been presented at numerous regional, national, and international conferences. Dr. Koppel’s professional experience includes consulting in the area of management information systems and operations management.